

CLAIMS

1. A valve, comprising a valve body and a tube made of an elastomer extending through the inside of said valve body, and for closing off the flow of fluid in said tube,

said valve characterized by further
comprising squeezing means disposed facing each other
across said tube, said squeezing means being adapted so
that said squeezing means can be brought close together
to collapse said tube and close the flow passage inside
said tube and so that at least one of said squeezing
means can be moved along said tube so as to move a
collapsed position where said tube is collapsed by said
squeezing means while maintaining' said flow passage in
the closed state.

2. The valve according to claim 1, wherein said squeezing means comprises a movable roller and a pressing surface formed on said valve body, part of said tube is arranged along said pressing surface, and said roller moves to a position facing said pressing surface to collapse said tube and then moves parallel to said pressing surface.

25 3. The valve according to claim 2, wherein said
roller is supported by a rotating member rotating with
respect to said valve body about an axis of rotation, and
said pressing surface comprises an arc-shaped surface
formed on said valve body and extending about said axis
of rotation.

30 4. The valve according to claim 3, wherein a cylinder chamber accommodating said piston is formed in said valve body, and said piston is driven in the axial direction of said cylinder chamber by the working fluid so that said rotating member rotates about said axis of rotation linked with said piston.

35 5. The valve according to claim 4, wherein a
spring is provided in said cylinder chamber and said
piston is urged by said spring toward one end of said

cylinder chamber in the axial direction.

6. The valve according to claim 5, wherein said piston is positioned by said spring at a neutral position where said roller supported by said rotating member linked with said piston collapses said tube together with said pressing surface to close the flow passage in said tube, and, when opening the flow passage in said tube and when making said roller move along the flow passage axis of said tube while collapsing said tube with said pressing surface, pressure of a working fluid is utilized to make said piston move from the valve fully closed position and said neutral position.

7. The valve according to claim 4, wherein said rotating member further comprises an engagement shaft part positioned at an opposite side from said roller across the axis of rotation of said rotating member and extending parallel to said axis of rotation, said piston is formed with a notch extending in a direction vertical to the direction of movement of said piston, and said engagement shaft part engages with said notch and said engagement shaft part rotates about the axis of rotation of said rotating member along with movement of said piston so as to make said rotating member rotate about said axis of rotation.

8. The valve according to claim 4, wherein said rotating member has a cylindrical surface, a rack is provided on a side surface of said piston, a gear engaging with said rack is provided on the cylindrical surface of said rotating member, and said rotating member rotates about the axis of rotation along with movement of said piston.

9. The valve according to claim 3, wherein said rotating member is driven by an electric motor.

10. The valve according to claim 9, wherein said electric motor comprises a stepping motor.

11. The valve according to claim 1, wherein a cylinder chamber extending parallel to said tube is

formed in said valve body, and said squeezing means comprises a roller provided at a front end of a projecting part extending from a piston accommodated in said cylinder chamber in a direction vertical to an axis 5 of movement of said piston and a pressing surface formed on said valve body.

12. The valve according to claim 11, wherein said pressing surface has a stepped surface.